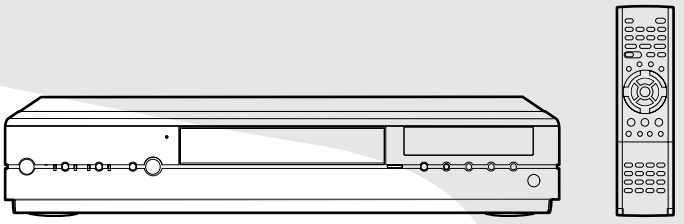
TOSHIBA

FILE NO. 810-200568

SERVICE MANUAL

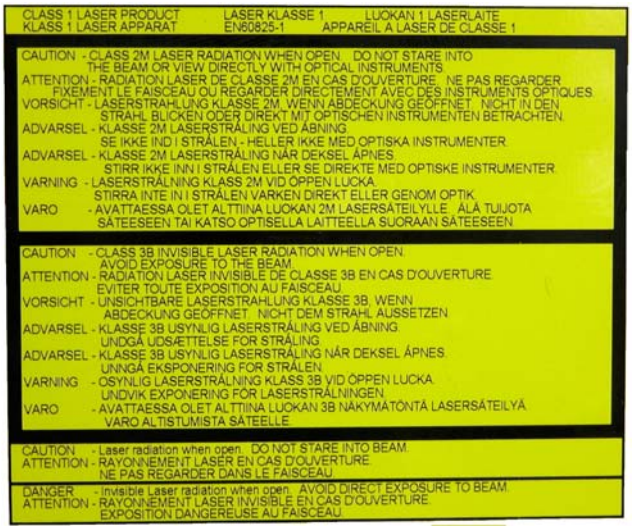
HDD/DVD VIDEO RECORDER

RD-XS54SU



DOCUMENT CREATED IN JAPAN, JULY, 2005

LASER BEAM CAUTION LABEL


CLASS 1 LASER PRODUCT
KLASS 1 LASER APPARAT
LASER KLASSE 1
EN60825-1
LUOKAN 1 LASERLAITE
APPAREIL A LASER DE CLASSE 1
CAUTION - CLASS 2M LASER RADIATION WHEN OPEN. DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS
ATTENTION - RADIATION LASER DE CLASSE 2M EN CAS D'OUVERTURE. NE PAS REGARDER FIXEMENT LE FAISCEAU OU REGARDER DIRECTEMENT AVEC DES INSTRUMENTS OPTIQUES.
VORSICHT - LASERSTRAHLUNG KLASSE 2M, WENN ABDECKUNG GEÖFFNET. NICHT IN DEN STRAHL BLICKEN ODER DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.
ADVARSEL - KLASSE 2M LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN - HELLER IKKE MED OPTISKA INSTRUMENTER.
ADVARSEL - KLASSE 2M LASERSTRÅLING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER.
VARNING - LASERSTRÅLNING KLASS 2M VID ÖPPEN LUCKA. STIRRA INTE IN I STRÅLEN VARKEN DIREKT ELLER GENOM OPTIK.
VARO - AVATTAESSA OLET ALTTIINA LUOKAN 2M LASERSÄTEILYLLE. ÄLÄ TUIJOTA SÄTEESEEN TAI KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.
CAUTION - CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.
ATTENTION - RADIATION LASER INVISIBLE DE CLASSE 3B EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION AU FAISCEAU.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ADVARSEL - KLASSE 3B USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL - KLASSE 3B USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING - OSYNLIG LASERSTRÅLNING KLASS 3B VID ÖPPEN LUCKA. UNDVIK EXPONERING FÖR LASERSTRÅLNINGEN.
VARO - AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.
CAUTION - Laser radiation when open. DO NOT STARE INTO BEAM.
ATTENTION - RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.
DANGER - Invisible Laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.

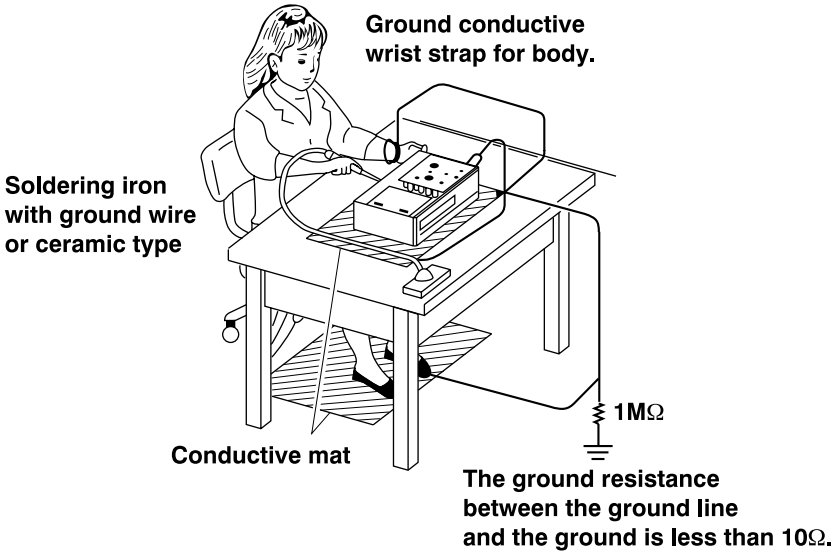
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of a laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.


Ground conductive wrist strap for body.
Soldering iron with ground wire or ceramic type
1MΩ
Conductive mat
The ground resistance between the ground line and the ground is less than 10Ω.

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SAFETY NOTICE

SAFETY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000 Ω per volt or more sensitivity.

Connect a 1500 Ω 10 W resistor, paralleled by a 0.15 µF 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

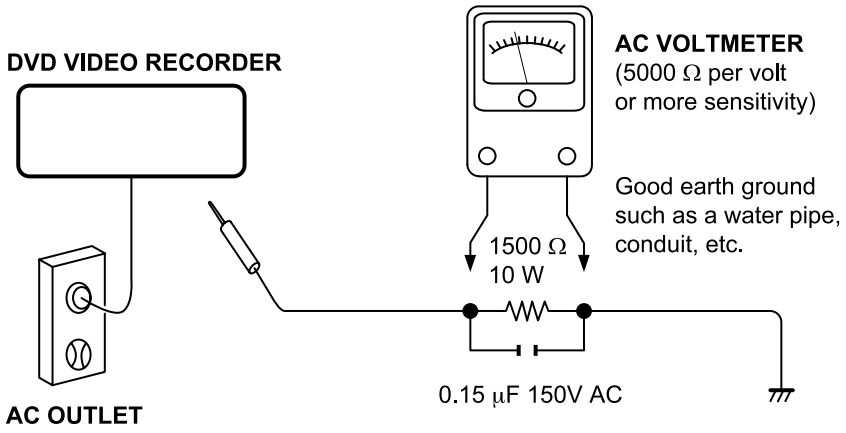
Measure the AC voltage across the 1500 Ω resistor.

The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3 V. A reading exceeding 0.3 V indicates that a dangerous potential exists, the fault must be located and corrected.

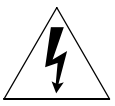
Repeat the above test with the DVD VIDEO RECORDER power plug reversed.

NEVER RETURN A DVD VIDEO RECORDER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.

READING SHOULD NOT EXCEED 0.3V



Test all exposed metal.
Voltmeter Hook-up for Leakage Current Check



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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SECTION 1
GENERAL DESCRIPTIONS

1. OPERATING INSTRUCTIONS

Please refer to the owner's manual about the contents.

2. LOCATION OF MAIN PARTS

2-1. Location of Main Parts

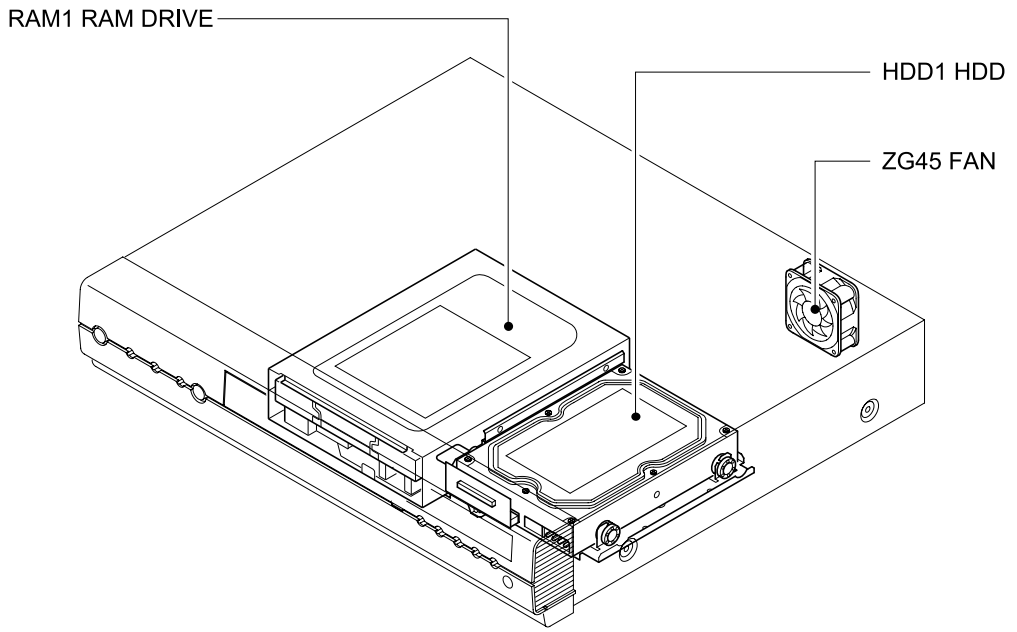

Fig. 1-2-1

2-2. Location of PC Boards

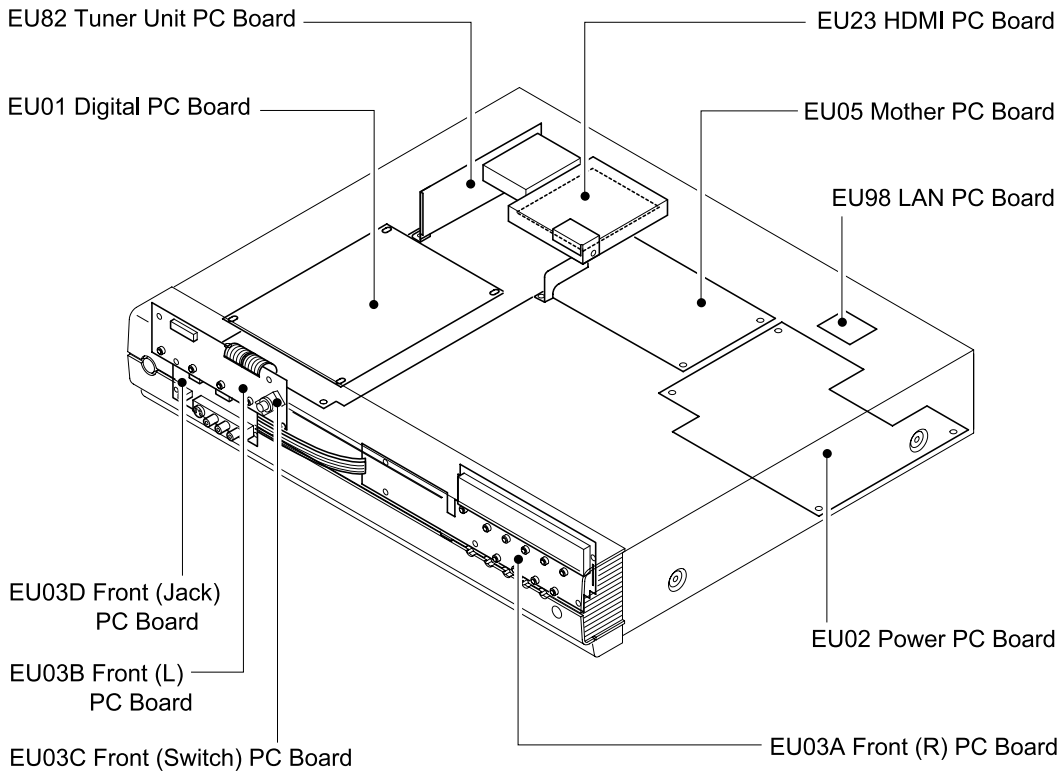
EU82 Tuner Unit PC Board
EU23 HDMI PC Board
EU01 Digital PC Board
EU05 Mother PC Board
EU98 LAN PC Board
EU03D Front (Jack) PC Board
EU02 Power PC Board
EU03B Front (L) PC Board
EU03C Front (Switch) PC Board
EU03A Front (R) PC Board

Fig. 1-2-2

SECTION 2
PART REPLACEMENT AND ADJUSTMENT PROCEDURES

CAUTIONS BEFORE STARTING PART REPLACEMENT

Electronic parts are susceptible to static electricity and may easily damaged, so do not forget to ground as required. Many screws are used inside the unit. To prevent the screws from missing or dropping, etc. always use a magnetized screwdriver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

1. REPLACEMENT OF MECHANICAL PARTS

1-1. Cabinet Replacement

1-1-1. Top Cover

1. Remove seven screws (1), then remove the top cover (2).

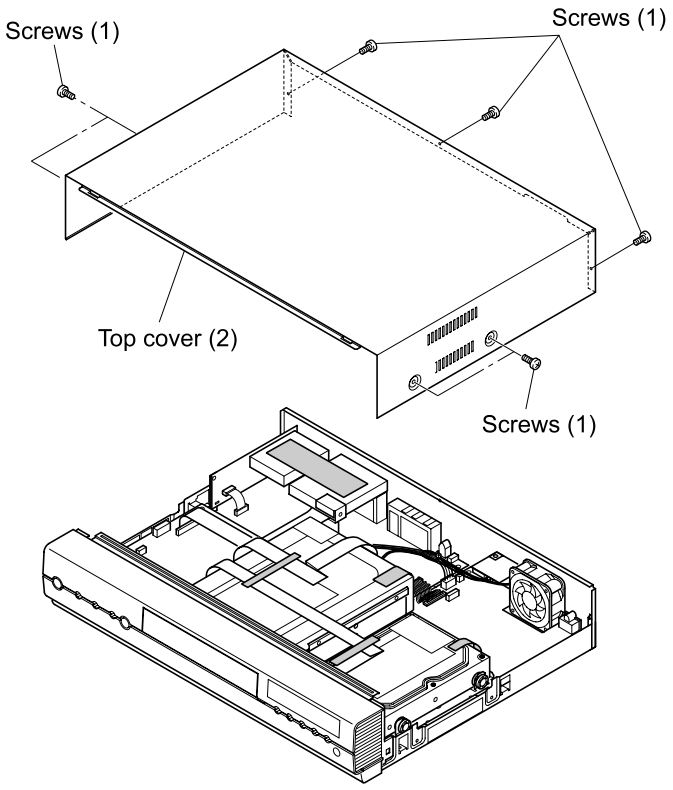

Fig. 2-1-1

1-1-2. HDD

1. Remove the top cover. (Refer to item 1-1-1.)
2. Peel off two tapes (1).
3. Remove the screw (2) and the erath lead (3).
4. Remove four screws (4).
5. Disconnect the flexible cable (5) and the connector (6).
6. Remove four screws (7), and remove the dumper (9) and the HDD (10) from fixing bracket (8).

Note:

- After replacing, attach the tape (1) to its original position.

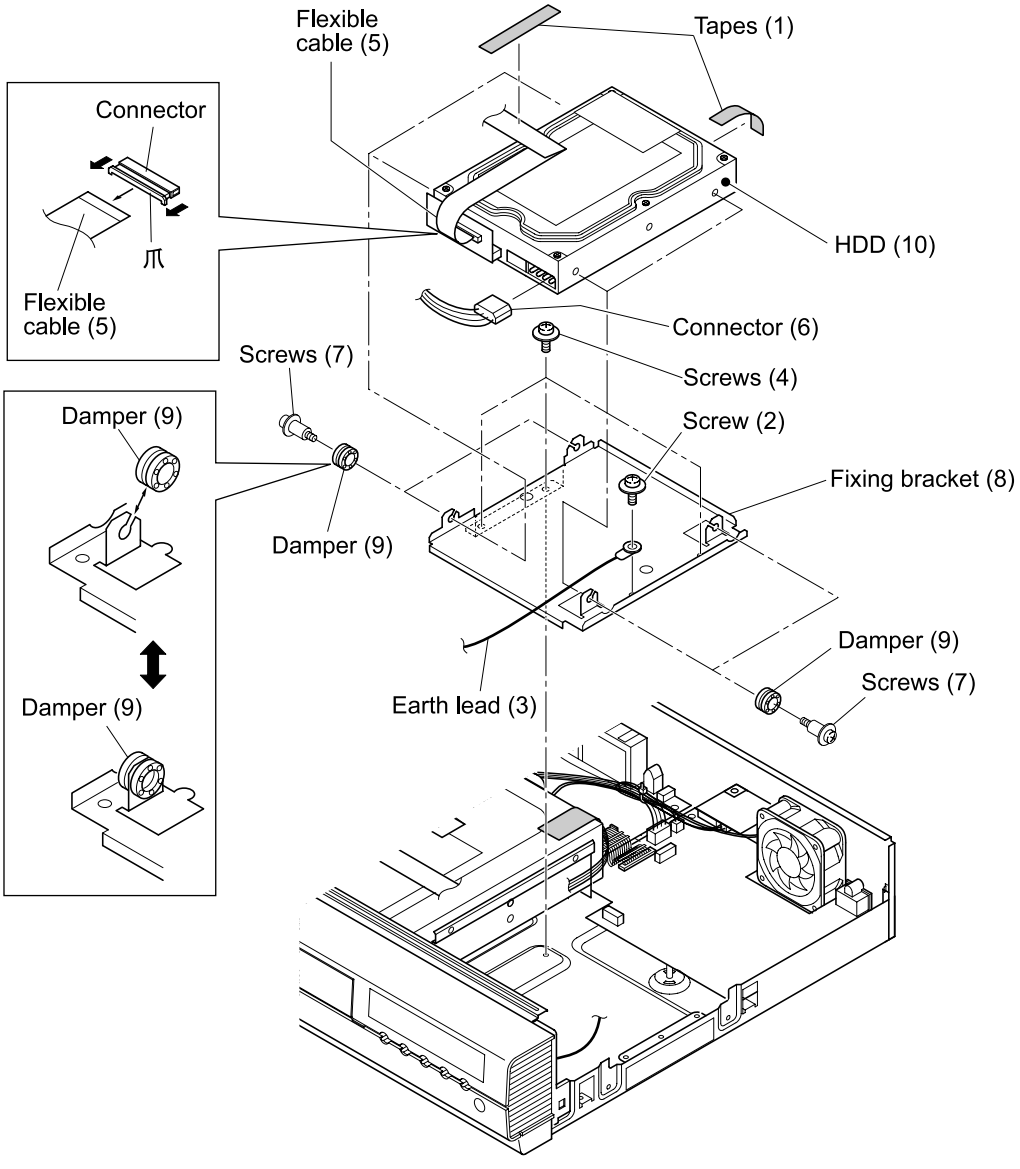

Fig. 2-1-2

1-1-3. Front Panel

1. Remove the top cover. (Refer to item 1-1-1.)
2. Peel off the tape (1).
3. Disconnect the connector (2) and the flexible cable(3).
4. Remove two screws (4) and two bases (5).
5. Remove the screw (6) and the screw (7), then remove two earth leads (8).
6. Disconnect the connector (9) and the flexible cable (10), then remove the front panel (11).

Note:

- After replacing, attach the tape (1) to its original position.

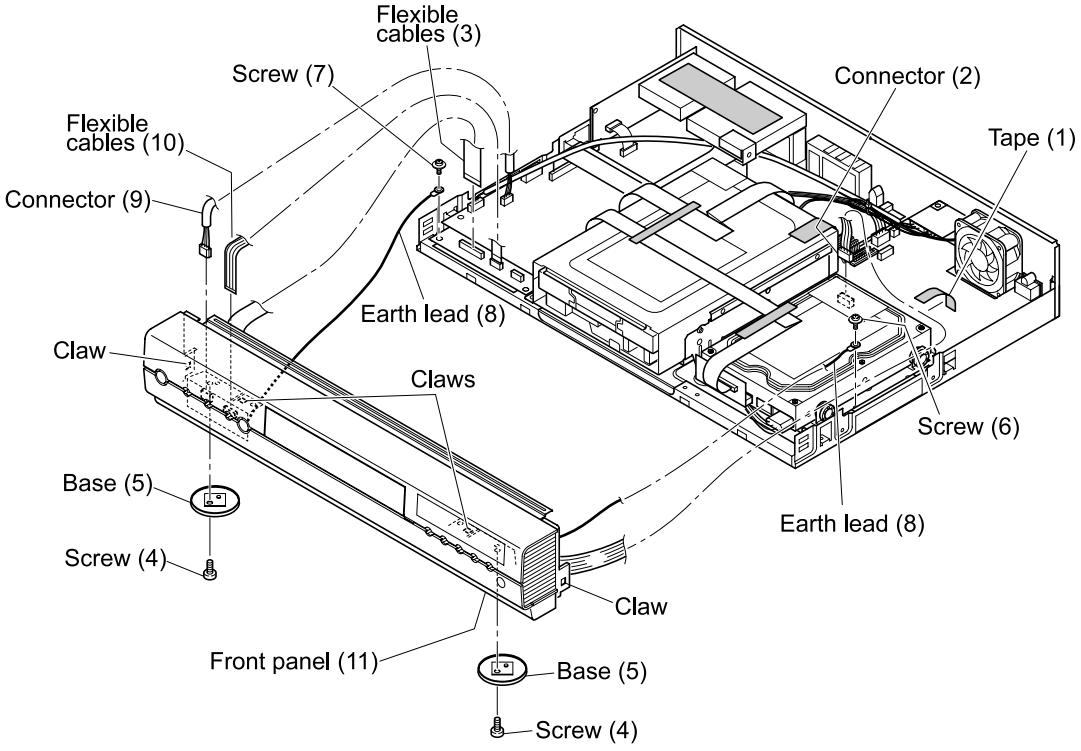

Fig. 2-1-3

1-1-4. RAM Drive

1. Remove the front panel. (Refer to item 1-1-3.)
2. Peel off two tapes (1).
3. Disconnect the flexible cable (2) and the connector (3).
4. Remove three screws (4), then remove the RAM drive (5).
5. Remove four screws (6), then remove the fixing bracket (7).

Note:

- After replacing, attach the tape (1) to its original position.

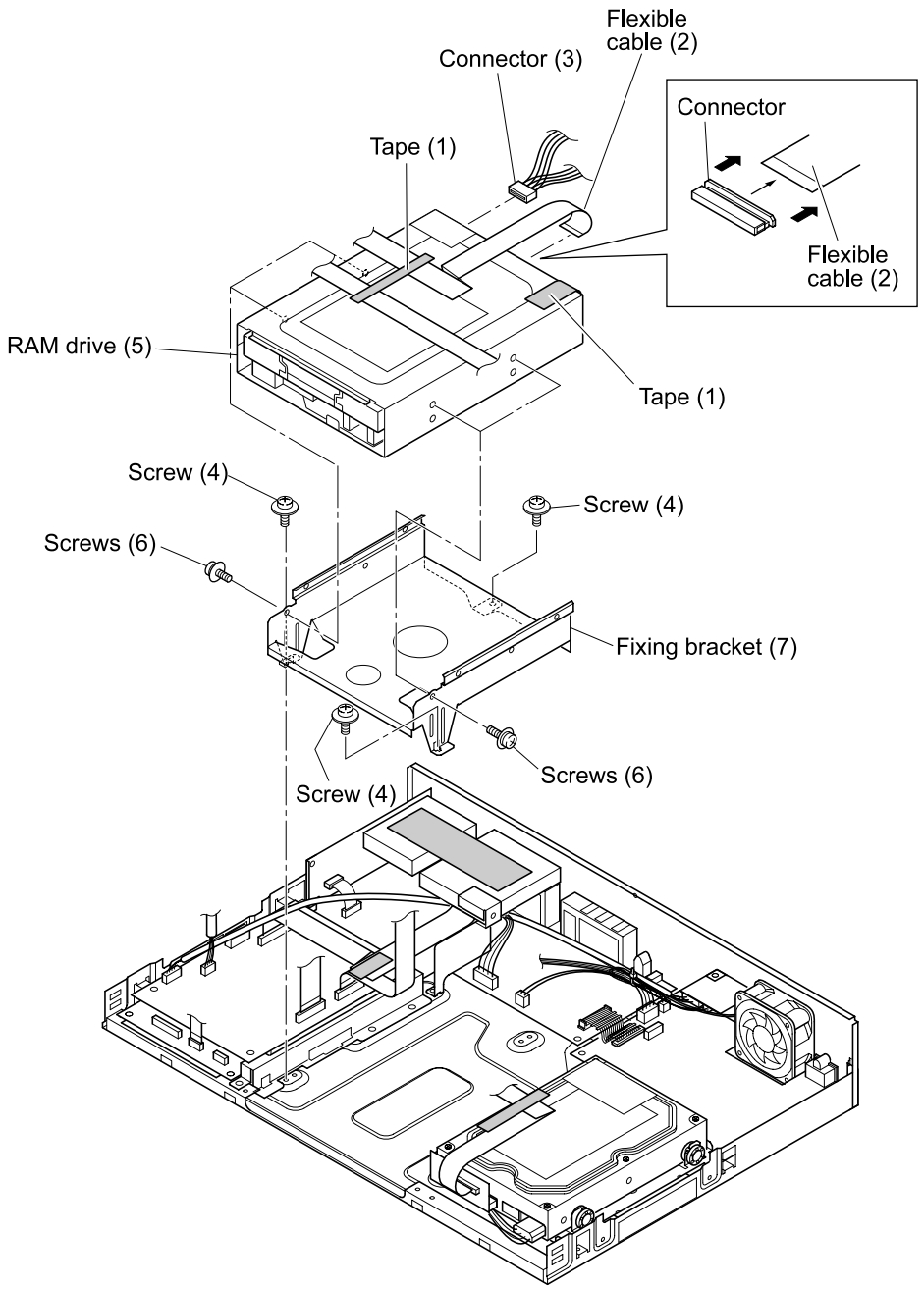

Fig. 2-1-4

1-1-5. Rear Panel

1. Remove seven screws (1) and six screws (2).
2. Remove two claws, then remove the rear panel (3).
3. Remove two screws (4) and the fan (5).

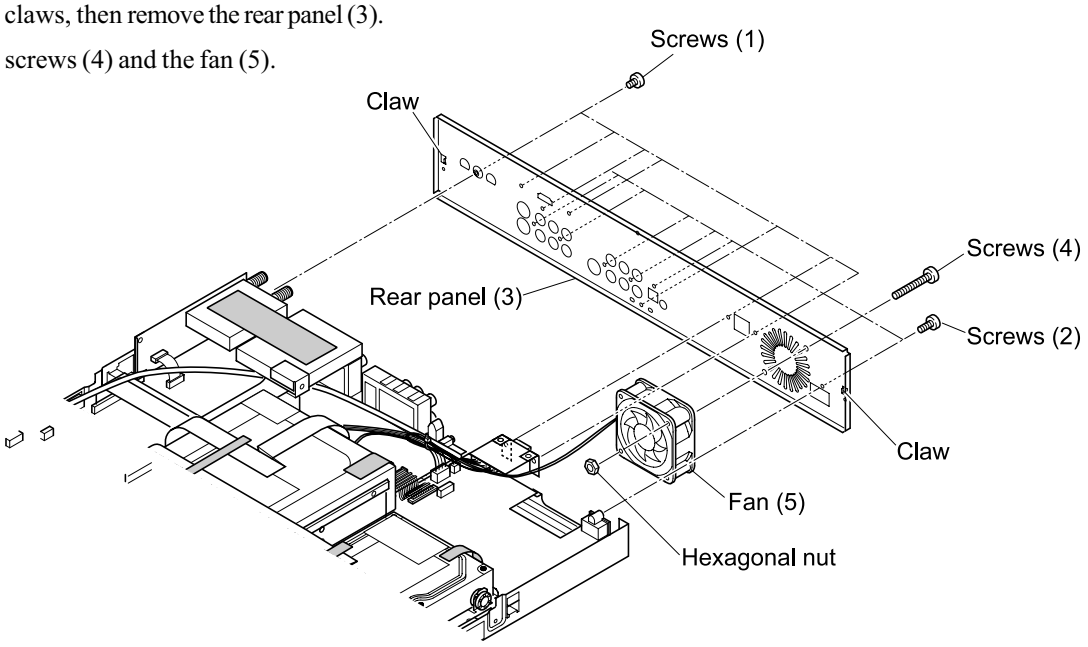

Fig. 2-1-5

1-1-6. Fan

1. Remove the clamp (1)
2. Remove the connector (2).
3. Remove two screws (3), then remove the fan (4).

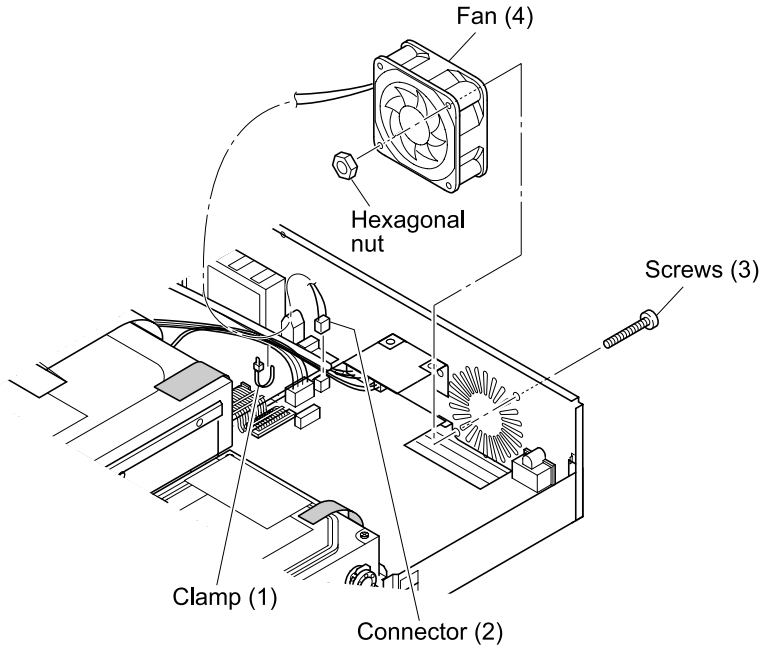

Fig. 2-1-6

1-2. PC Board Replacement

1-2-1. Digital PC Board

1. Peel off the tape (1).
2. Disconnect three flexible cables (2) and two connectors (3).
3. Remove four screws (4), then remove the Digital PC board (5).

Note:

- The Digital PC board (5) is connected to the Mother PC board (6) by a connector (7). Take notice when removing.
- After replacing, attach the tape (1) to its original position.

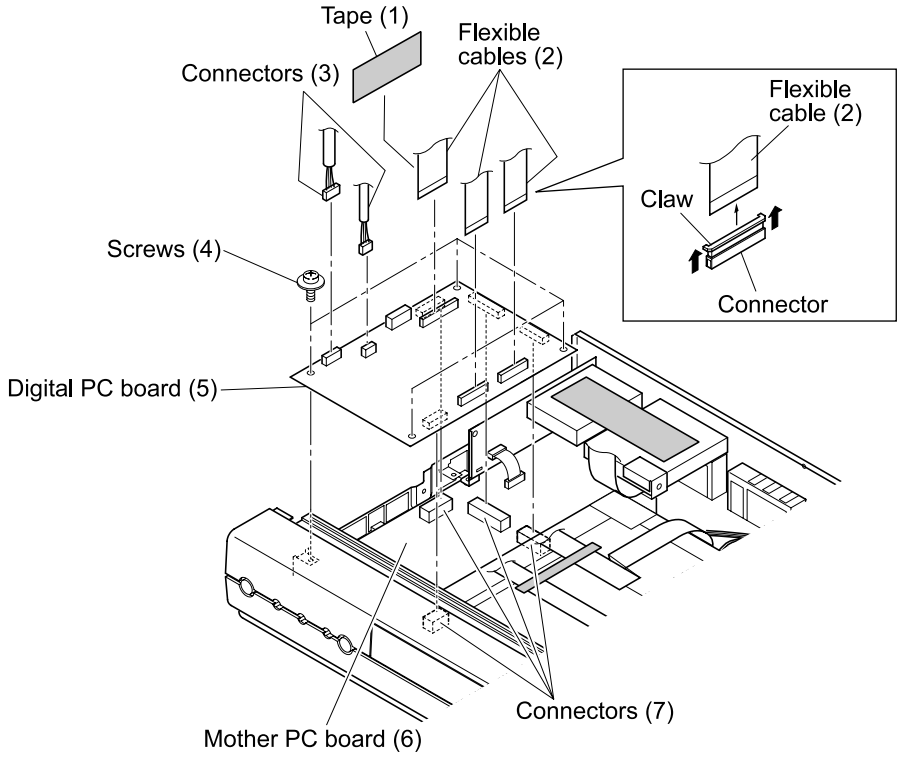

Fig. 2-1-7

1-2-2. Tuner Unit PC Board

1. Peel off the tape (1).
2. Remove the screw (2) and the screw (3).
3. Disconnect the flexible cable (4).
4. Remove the screw (5) , then remove the Tuner Unit PC board (6).

Note:

- After replacing, attach the tape (1) to its original position.

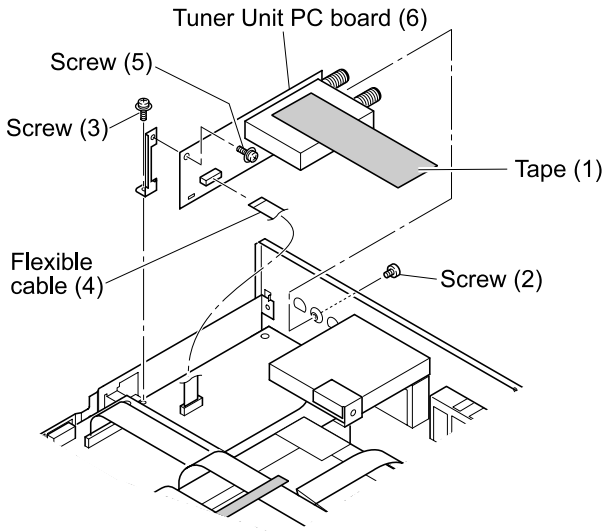

Fig. 2-1-8

1-2-3. HDMI PC Board

1. Peel off two tape (1).
2. Remove three screws (2) and two screws (3).
3. Remove the top case (4)
4. Remove four screws (5), then disconnect the flexible cable (6) and the connector (7), then remove the HDMI board (8).

Note:

- After replacing, attach the tape (1) to its original position.

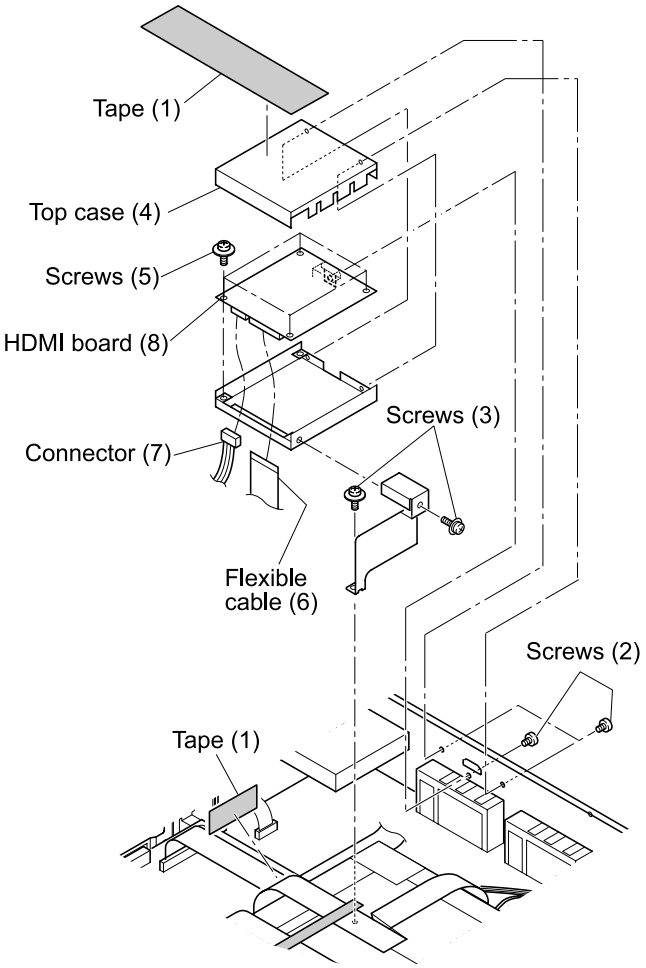

Fig. 2-1-9

1-2-4. LAN PC Board

1. Remove two screws (1).
2. Disconnect two connector (2), then remove the LAN PC board (3).
3. Remove two screws (4) and two fixing brackets (5).

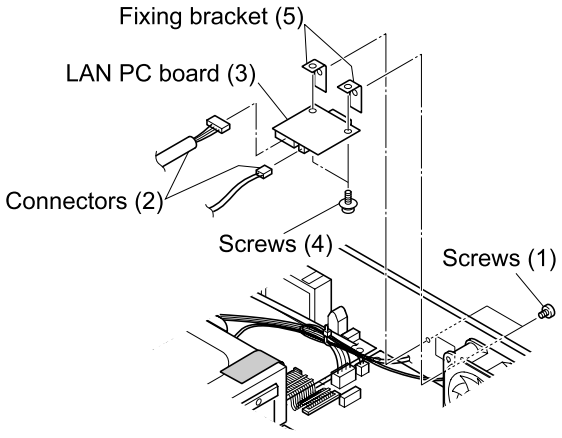

Fig. 2-1-10

1-2-5. Mother PC Board

1. Remove the front panel. (Refer to item 1-1-3.)
2. Remove the rear panel. (Refer to item 1-1-5.)
3. Remove the Digital PC board. (Refer to item 1-2-1.)
4. Remove the Tuner Unit PC board. (Refer to item 1-2-2.)
5. Remove the HDMI board. (Refer to item 1-2-3.)
6. Disconnect two flexible cables (1) and two connectors (2).
7. Disconnect the connector (3).
8. Remove four screws (4).
9. Pull out the Mother PC board (5) toward the rear side (indicated by the arrow).

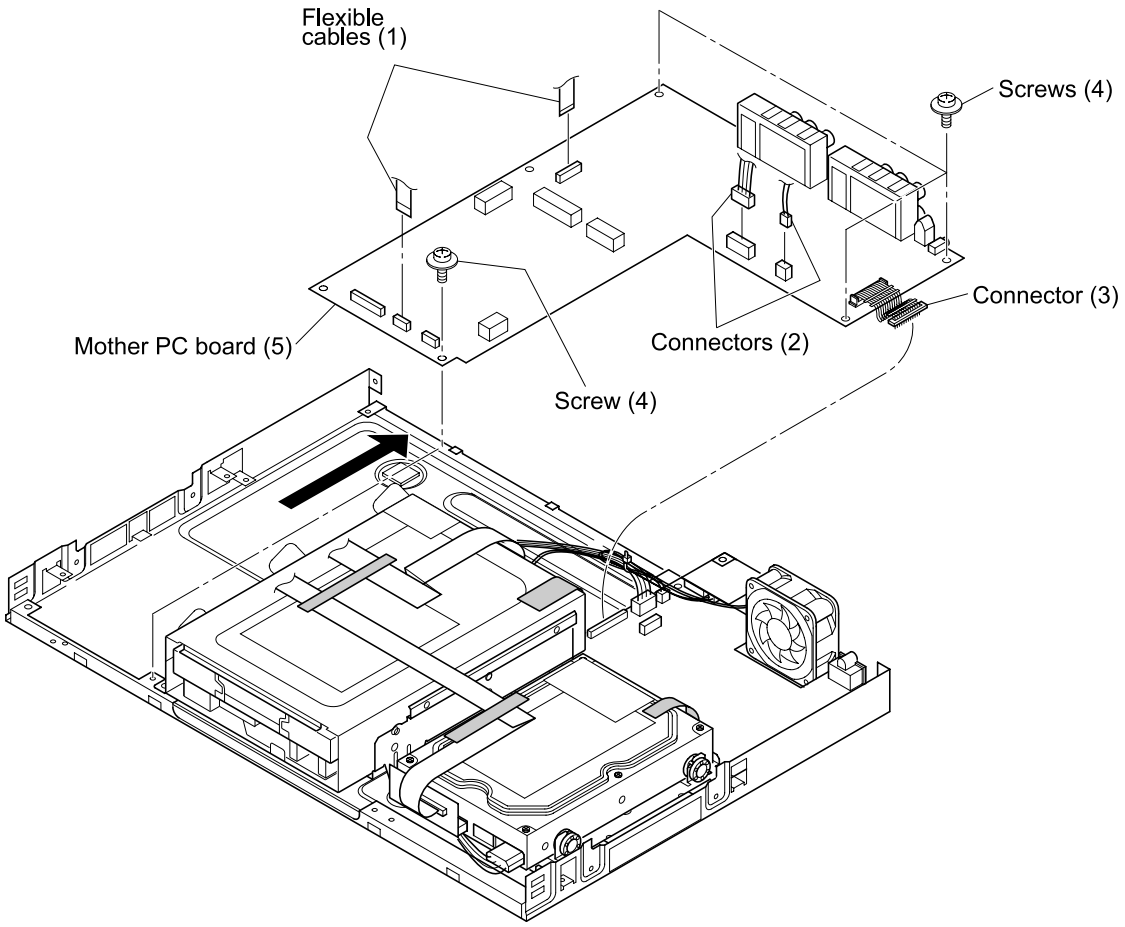

Fig. 2-1-11

1-2-6. Power PC Board

Cautions :

- **Danger of explosion if battery is incorrectly replaced.**
- **Replace only with the same or equivalent type.**

1. Remove the LAN PC board. (Refer to item 1-2-4.)
2. Remove the Clamp (1)
3. Disconnect three connectors (2) and the connector (3).
4. Remove the screws (4) and four screw (5).
5. Remove the Power PC board (6).

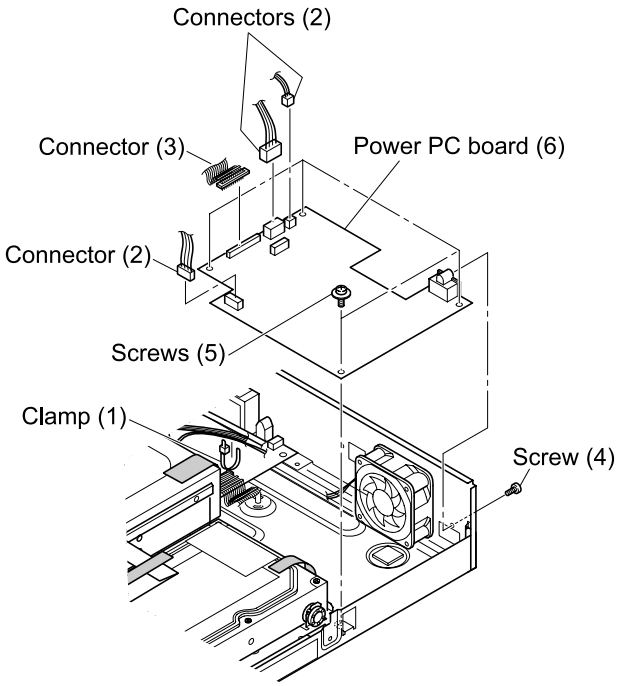

Fig. 2-1-12

1-2-7. Front (R), Front (L/SW), Front (Jack) PC Boards

1. Remove the front panel. (Refer to item 1-1-3.)
2. Remove four screws (1), then remove the stay (2).
4. Remove five screws (3), then remove the Front (R) PC board (4).
5. Remove two screws (5), then remove the Front (Jack) PC board (6).
6. Remove three screws (7), then remove the Front (L/SW) PC board (8).

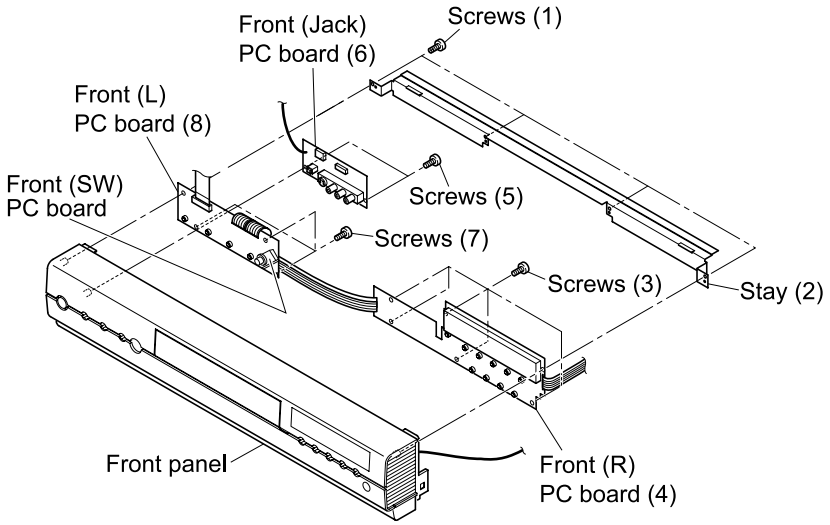

Fig. 2-1-13

2. WIRING CONNECTION DIAGRAM

After the servicing is complete, return the wiring to its original state by using the diagram below as a reference.

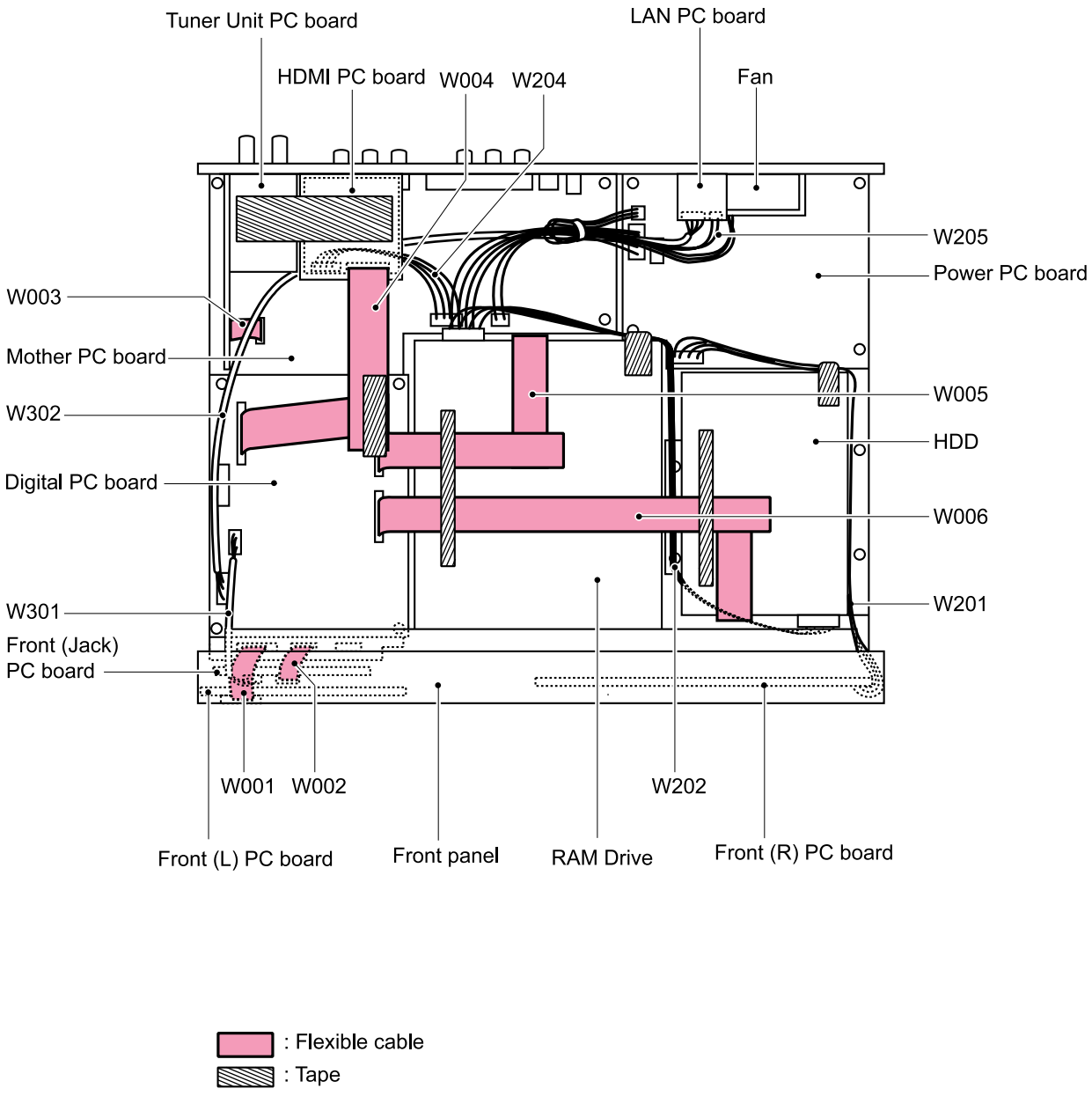

Fig. 2-2-1

SECTION 4
PARTS LIST

SAFETY PRECAUTION

The parts identified by ! (⚠) mark are critical for safety. Replace only with part number specified.

The mounting position of replacement is to be identical with originals.

The substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

NOTICE

The part number must be used when ordering parts in order to assist in processing, be sure to include the model number and description.

ABBREVIATIONS

- **Integrated Circuit (IC)**
- **Capacitor (Cap)**
  - **Capacitance Tolerance (for Nominal Capacitance more than 10pF)**

Table 4-2-1

Symbol	B	C	D	F	G	J	K	M	N
Tolerance %	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20	± 30

Symbol	P	Q	T	U	V	W	X	Y	Z
Tolerance %	+ 100 0	+ 30 – 10	+ 50 – 10	+ 75 – 10	+ 20 – 10	+ 100 – 10	+ 40 – 20	+ 150 – 10	+ 80 – 20

Ex. 10MF J = 10µF ± 5%

  - **Capacitance Tolerance (for Nominal Capacitance 10pF or less)**

Table 4-2-2

Symbol	B	C	D	F	G
Tolerance pF	± 0.1	± 0.25	± 0.5	± 1	± 2

Ex. 10pF G = 10pF ± 2pF

- **Resistor (Res)**
  - **Resistance tolerance**

Table 4-3-1

Symbol	B	C	D	F	G	J	K	M
Tolerance %	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20

Ex. 470ohmJ = 470ohm± 5%

1. EXPLODED VIEWS

1-1. Packing Assembly

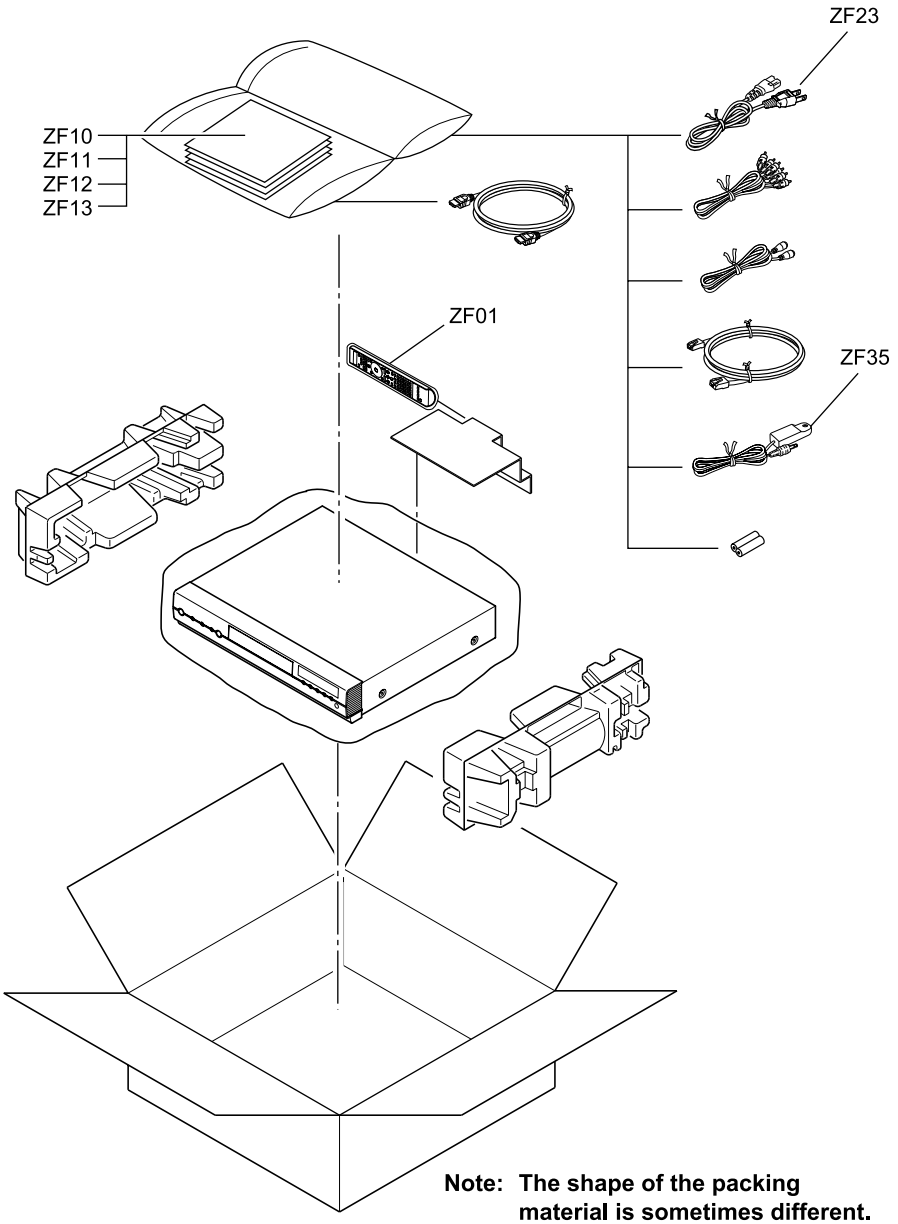

Fig. 4-4-1

1-2. Chassis Assembly

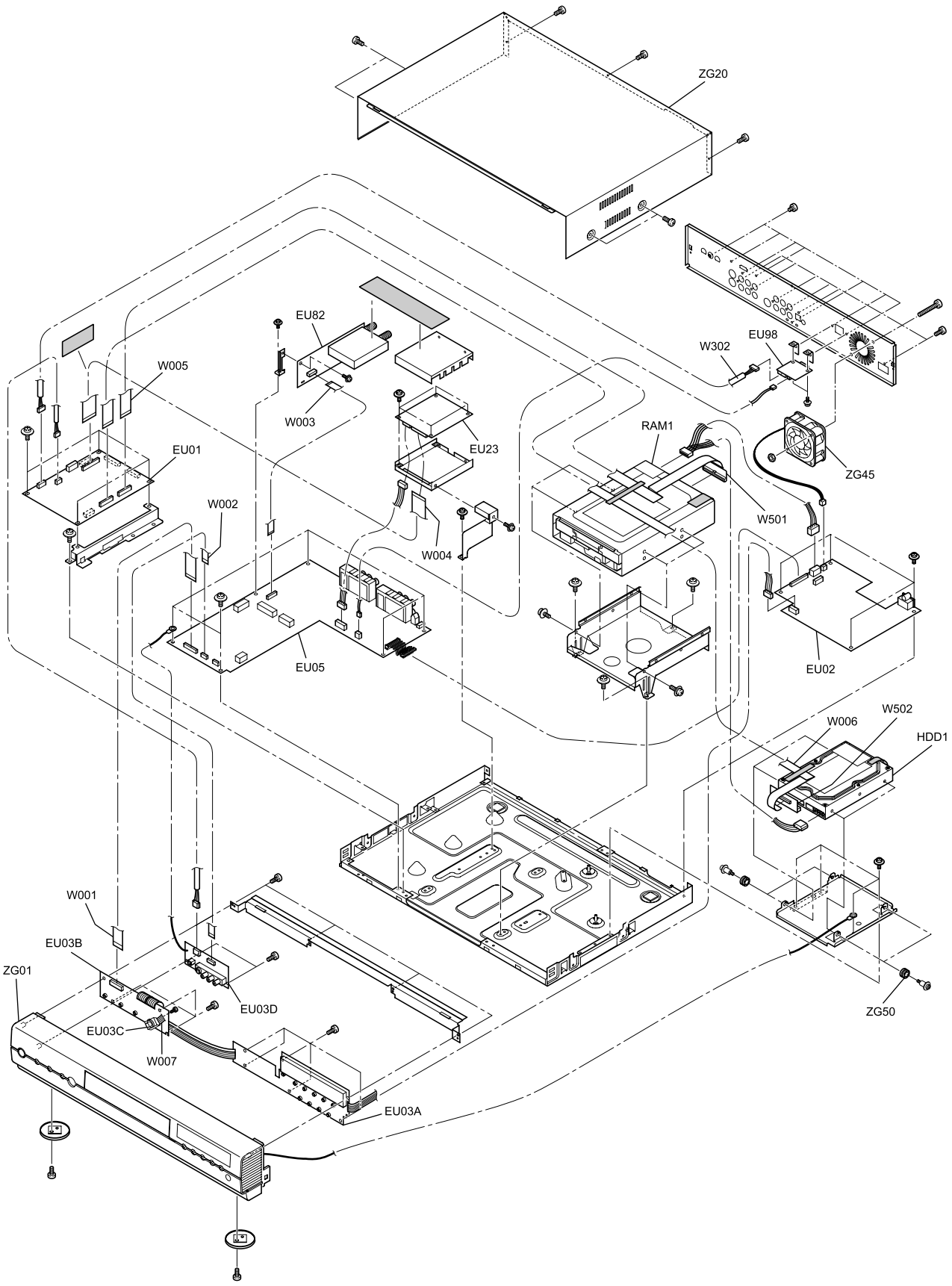

Fig. 4-4-2

2. PARTS LIST

	Location No.	Part No.	Description	
			- MECHANICAL PARTS -	
	HDD1	P000442230	HDD,250GB	7Y250P0
	HDD1	P000445990	HDD,250GB	ST3250823ACE
!	RAM1	P000432490	DVD-RAM	SW-9573-ETS
	W001	P000435000	Cable,Flexible	FFC,18P,L120
	W002	P000433810	Cable,Flexible	FFC,11P,L120
	W003	P000433800	Cable,Flexible	FFC,11P,L60
	W004	P000446050	Cable,Flexible	FFC,28P,L250
	W005	P000433820	Cable,Flexible	FFC,40P,L280
	W006	P000387340	Cable,Flexible	FFC,40P,L360
	W007	P000446000	Cable,Flexible	FFC,7P,L20
	W302	P000445980	Cable,LAN-ZHR	8P-L450
	W501	P000401270	CONV Unit,ATAPI-FFC	FFC-RDXS41E
	W502	P000401270	CONV Unit,ATAPI-FFC	FFC-RDXS41E
	ZF01	P000446020	Remote Control Unit	SE-R0199
!	ZF10	P000440760	Owners Manual,ST	ENGLISH
!	ZF11	P000440770	Owners Manual,OP	ENGLISH
!	ZF12	P000440780	Owners Manual,Q	ENGLISH
!	ZF13	P000440790	Owners Manual,Q	SPANISH
!	ZF23	P000446040	Power Cord	
	ZF35	P000416800	IR-BLASTER	RWS1000-0062E
	ZG01	P000446150	Panel Assy,Front	
	ZG20	P000446010	Cover,Top	
	ZG45	P000401260	Fan,DC	5025LL12SND2
	ZG50	P000438100	Damper,HDD	XS43-34,MOLD RUBBER

	Location No.	Part No.	Description	
			- ELECTRICAL PARTS -	
	EU01	P000446060	PC Board Assy	Digital
			- INTEGRATED CIRCUITS -	
	IC202	P000446310	IC	SN74AHC1G04HDCKR
	IC203	P000446310	IC	SN74AHC1G04HDCKR
	IC204	P000378060	IC	LAN91C113I-NE
	IC303	P000416750	IC	BA25BC0FP-E2
	IC304	P000391280	IC	PQ070XZ01ZPH
	IC305	P000391240	IC	NJM2125F-TE1
	IC309	P000446300	IC	SN74AHC1G08HDCKR
	IC310	79040306	IC	PST594JMT
	IC317	P000377920	IC	SN74LV244APWR
	IC603	79040074	IC	TC74HCU04AF-TP1
			- TRANSISTORS -	
	Q301	P000446230	Transistor	2SA1162-Y-TE85L.F
	Q302	P000446230	Transistor	2SA1162-Y-TE85L.F
	Q303	P000446230	Transistor	2SA1162-Y-TE85L.F
	Q304	P000446230	Transistor	2SA1162-Y-TE85L.F
	Q305	P000446230	Transistor	2SA1162-Y-TE85L.F
	Q306	P000446220	Transistor	2SC2712-Y-TE85L.F
	Q307	P000446220	Transistor	2SC2712-Y-TE85L.F
	Q308	P000446230	Transistor	2SA1162-Y-TE85L.F
	Q309	P000446230	Transistor	2SA1162-Y-TE85L.F
			- MISCELLANEOUS -	
	X201	P000440380	Resonator	NX8045GB-LN-CF-001-25M
	X301	79089168	Oscillator	NX8045GB-LN-CF-003-24.576M
	X302	79089168	Oscillator	NX8045GB-LN-CF-003-24.576M
	X303	P000377990	Oscillator	2725T-NSA5293C-27.0M
	X600	P000446160	Resonator	NX8045GB-LN-CF-001-32M
!	EU02	P000446030	PC Board Assy	Power
	EU03A	P000446070	PC Board Assy	Front(R)
			- INTEGRATED CIRCUITS -	
	IC101	P000416700	IC	PT6315-L
	IC102	P000434980	IR-MODULE	GP1UM271RK0F
			- TRANSISTORS -	
	Q100	P000446250	Transistor	RN1401-TE85L.F
			- DIODES -	
	D104	P000416660	Diode,LED	EL-3105-1UYOC/S530-A3
			- MISCELLANEOUS -	
	A100	P000446190	FL-DISPLAY	HNV-10SM47T
	S100	P000391050	Switch,Tact	EVQ11G04M
	S105	P000391050	Switch,Tact	EVQ11G04M
	S107	P000391050	Switch,Tact	EVQ11G04M
	S109	P000391050	Switch,Tact	EVQ11G04M
	S113	P000391050	Switch,Tact	EVQ11G04M
	S116	P000391050	Switch,Tact	EVQ11G04M
	S118	P000391050	Switch,Tact	EVQ11G04M
	S119	P000391050	Switch,Tact	EVQ11G04M
	S121	P000391050	Switch,Tact	EVQ11G04M
	S122	P000391050	Switch,Tact	EVQ11G04M
	EU03B	P000446080	PC Board Assy	Front(L)
			- TRANSISTORS -	
	Q101	P000446250	Transistor	RN1401-TE85L.F
	Q102	P000446250	Transistor	RN1401-TE85L.F
	Q103	P000446250	Transistor	RN1401-TE85L.F
	Q104	P000446250	Transistor	RN1401-TE85L.F
	Q105	P000446250	Transistor	RN1401-TE85L.F
	Q106	P000446250	Transistor	RN1401-TE85L.F

Location No.	Part No.	Description	
Q107	P000446200	Transistor	RN2401-TE85L.F
Q108	P000446200	Transistor	RN2401-TE85L.F
Q110	P000446200	Transistor	RN2401-TE85L.F
Q111	P000446200	Transistor	RN2401-TE85L.F
		- DIODES -	
D101	P000416670	Diode,LED	EL-3105-1VRT
D102	P000416680	Diode,LED	EL-264-7SYGC/S530-E3
D103	P000416680	Diode,LED	EL-264-7SYGC/S530-E3
D105	P000446280	Diode,LED	EL-3105-1UBT/S1142
D121	79060033	Diode,LED	SPR-325TVW
D123	P000416670	Diode,LED	EL-3105-1VRT
D124	P000416680	Diode,LED	EL-264-7SYGC/S530-E3
D129	P000446290	Diode,LED	EL-209UBSYGC/S530-E3/S1142
		- MISCELLANEOUS -	
S102	P000391050	Switch,Tact	EVQ11G04M
S112	P000391050	Switch,Tact	EVQ11G04M
S114	P000391050	Switch,Tact	EVQ11G04M
S115	P000391050	Switch,Tact	EVQ11G04M
EU03C	P000446090	PC Board Assy	Front(Switch)
		- MISCELLANEOUS -	
S130	P000446170	Switch,JOG	JXS0000-1401F
EU03D	P000446140	PC Board Assy	Front Jack
		- MISCELLANEOUS -	
J170	P000387300	Jack,DV	CSS5004-2255F
J171	P000402780	Jack,PIN	LAP5000-1201F
EU05	P000446100	PC Board Assy	Mother
		- INTEGRATED CIRCUITS -	
IC701	P000391180	IC	PST3222NR
IC702	P000391150	IC	CD74HCT125M
IC901	P000440480	IC	PCM1755DBQR
IC902	79040044	IC	NJM4580E-T1
IC903	P000416650	TERMINAL,OPT	LAF1001-0301F
ICA01	P000416760	IC	PCM1851PJT
ICA03	79040397	IC	MM1575ANRE
ICB10	P000395150	IC	MM1565AFBE
ICW01	P000391260	IC	MM1568DJBEG
ICX01	P000401210	IC	MM1656XJBE
ICX04	P000440500	IC	XC6209F502PR
ICX31	79040371	IC	BA7046F-E2
ICX32	P000363370	IC	NJM2230MV-TE1
		- TRANSISTORS -	
Q700	P000446220	Transistor	2SC2712-Y-TE85L.F
Q701	P000446230	Transistor	2SA1162-Y-TE85L.F
Q904	P000446210	Transistor	RN2402-TE85L.F
Q905	P000446260	Transistor	RN1402-TE85L.F
Q906	P000446210	Transistor	RN2402-TE85L.F
Q908	P000446240	Transistor	HN-1C03F-B-TE85R.F
QW02	P000446260	Transistor	RN1402-TE85L.F
QW03	P000446230	Transistor	2SA1162-Y-TE85L.F
QW04	P000446230	Transistor	2SA1162-Y-TE85L.F
QX06	P000446230	Transistor	2SA1162-Y-TE85L.F
QX09	P000446230	Transistor	2SA1162-Y-TE85L.F
QX31	P000446220	Transistor	2SC2712-Y-TE85L.F
QX32	P000446260	Transistor	RN1402-TE85L.F
		- DIODES -	
D701	79060019	Diode,Chip	1SS355-TE17
D702	P000446270	Diode,Chip	1SS226-TE85L.F
D703	P000446270	Diode,Chip	1SS226-TE85L.F
D704	P000446270	Diode,Chip	1SS226-TE85L.F
D901	79060019	Diode,Chip	1SS355-TE17
D902	79060019	Diode,Chip	1SS355-TE17
DB06	79060096	Diode,Chip	MTZJT-7733D
		- MISCELLANEOUS -	
B701	P000377950	PIEZOELECTRIC SOUNDER	PS1240P02AT

Location No.	Part No.	Description	
J702	P000432600	Jack	LGY3309-0100F
JW01	P000402770	Jack	LAP5100-3201F
JX01	P000446330	Jack	LAP5100-2401F
X700	P000391040	Resonator	AT-41-12.5M
X701	P000363400	Oscillator	SP-T2A-F-32.768M
EU23	P000446120	PC Board Assy	HDMI
		- INTEGRATED CIRCUITS -	
ICD01	79040378	IC	MM1562FFBE
ICD02	P000416710	IC	PD0280B
ICD03	79040399	IC	MM1561JFBE
ICD04	P000416720	IC	SIL9030CTU
ICD05	P000440500	IC	XC6209F502PR
ICD06	P000416690	IC	TC7SH08FU-TE85L
ICD08	P000378040	IC	SN74AHC1G08HDCKR
		- TRANSISTORS -	
QD01	P000416640	FET	UPA672T-T1-A
		- MISCELLANEOUS -	
CND03	P000446180	Jack,HDMI	HMR45-AK5700
EU82	P000446130	PC Board Assy	Tuner
		- TRANSISTORS -	
QB99	79050016	Transistor	2SC2712-Y-TE85L
		- MISCELLANEOUS -	
MB01	P000416770	Tuner	ENGF6501GF
EU98	P000446110	PC Board Assy	LAN
		- MISCELLANEOUS -	
J707	P000446320	Jack,LAN	P02-104-11A9

Specification

■ **Power requirement during operation**
35.0W

■ **Power requirement at standby**
15.6W (Front panel display: on)
13.4W (Front panel display: off)

■ **Power supply**
120V AC, 60 Hz

■ **Mass**
5.8kg

■ **External dimension**
Width 434 x Height 81 x Depth 339mm

■ **Incoming channels**
TV: 2-69CH, Cable:1-125CH

■ **Antenna input/output terminal**
VHF/UHF: 75Ω, F Connector

■ **Signal system**
Standard NTSC Color TV system

■ **Laser**
Semiconductor laser, Wavelength: 650nm/780nm

■ **Format**
DVD-Video format

■ **Image recording system**
MPEG2

■ **Sound recording system**
Dolby Digital M1, M2, Linear PCM

■ **Internal hard disc**
250 GB

■ **VIDEO input**
1.0Vp-p (75Ω), Sync signal negative,
Pin jack x 3 systems, 2 at rear, 1 in front

■ **VIDEO output**
1.0Vp-p (75Ω), Sync signal negative,
Pin jack x 2 systems, 1 at rear

■ **S-VIDEO input**
(Y) 1.0Vp-p (75Ω), Sync signal negative,
Mini DIN4 Pin x 3 systems
(C) 0.286Vp-p (75Ω), 2 at rear, 1 in front

■ **S-VIDEO output**
(Y) 1.0Vp-p (75Ω), Sync signal negative,
Mini DIN4 Pin x 2 systems
(C) 0.286Vp-p (75Ω), 1 at rear

■ **COMPONENT output (Y, P_B, P_R)**
Y output (green), 1.0Vp-p (75Ω),
Sync signal negative, Pin jack x 1 system
P_B, P_R output (blue, red), 0.7Vp-p (75Ω),
Pin jack x 1 system each

■ **AUDIO input**
2.0V (rms), 22kΩ or above, pin jack
(L, R) x 3 systems
2 at rear, 1 in front

■ **AUDIO output**
2.0V (rms), 2.2kΩ or below, pin jack
(L, R) x 1 systems
1 at rear

■ **DIGITAL AUDIO OUTPUT BITSTREAM/PCM (OPTICAL terminal)**
Optical connector x 1 system

■ **G-LINK jack**
This is for connection of the supplied G-LINK cable only.

■ **HDMI output**
This is for connection of an HDMI cable.

■ **DV input**
4-pin x 1 in front

■ **LAN port**
100BASE-TX/10BASE-T x 1

■ **Remote control**
Wireless remote control (SE-R0199)

■ **Operating conditions**
Temperature: 41°F ~ 95°F (5°C ~ 35°C),
Position: Horizontal

■ **Clock display**
12 hour digital display

■ **Clock accuracy**
Quartz (monthly deviation: approximately ±30 seconds)

- This model complies with the below specifications.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN